



**Travis Air Force Base  
Supplement 1**

**15 JUNE 2001**

**Flying Operations**

**C-5 OPERATIONS PROCEDURES - LOCAL  
PROCEDURES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

---

**NOTICE:** This publication is available digitally on the AFDPO/PP WWW site at:  
<http://afpubs.hq.af.mil>.

---

OPR: 60 OG/OGV (Lt Col James Couch)  
Supersedes MCI 11-205, Vol 10/60 AMW1,  
15 September 1997

Certified by: 60 OG/CC (Col Janet Therianos)  
Pages: 25  
Distribution: F

---

AFI 11-2C-5, Volume 3, Chapter 10, 1 January 2000 is supplemented as follows: This supplement applies to all personnel assigned or attached to the 60th Air Mobility Wing. It also applies to the 349th Air Mobility Wing (AFRC) as concurred by the commander.

**SUMMARY OF REVISIONS**

**This document is substantially revised and must be completely reviewed.**

**10.1.** 60th Air Mobility Wing (AMW) and 349th Air Mobility Wing (AMW) Local Operating Guidelines.

**10.1.1.** The 60th Operations Group Commander (60 OG/CC) is the waiver authority for this chapter. Submit changes to this chapter via AF Form 847, **Recommendation for Change of Publication**, to 60th Operations Group Aircrew Standardization/Evaluation Division (60 OG/OGV).

**10.2.** Operational Mission Planning/Procedures.

**10.2.1.** Use of Terrain Charts. Pilots will use terrain charts on operational missions and off-station trainers for all unfamiliar airfields. A properly "CHUMed" terrain chart will be used for all departures which require a terrain chart review. The type of chart to be used depends on what is available for that part of the world. Any chart showing prominent details is acceptable, such as TPCs, sectionals, and JOGs. GNCs and JNCs are not acceptable.

**10.2.2.** Navigation Requirements. Any time the airplane is flown near a buffer zone, all available navigation aids, including radar, if operational, will be used to monitor navigation accuracy.

**10.2.3.** For oceanic flights, the pilot in command will monitor the coast-out and coast-in.

**10.2.4.** C-5 FMS 800 Procedures.

10.2.4.1. Coast Out Procedures. Use the procedures in [Table 10.1.](#), when plotting a coast-out fix rather than the procedures in AFI 11-2C-5, Volume 3, Table 11.1.

**NOTE:** Do not use the HOLD key (INU Control page) on any CDU while airborne.

**Table 10.1. Coast Out Fix Procedure.**

1. Go to Update page on all CDUs:
  - (a). INAV key – Press.
  - (b). Lateral scroll keys - As Required  
Laterally scroll to the INU Integrated Navigation page (INU Control displayed on LS 4).
  - (c). UPDATE (LS8) – Press
  - (d). LS2 - INU1/GPS (or as designated by the pilot's steering solution)  
Press LS2 until displayed.
2. Over coast out fix (simultaneously):
  - (a). FREEZE (LS6) – Press (all CDUs).
  - (b). MARK key – Press (on one CDU).
3. Record integrated position from scratch pad. This is based on what the pilots have selected as the steering solution.
4. Record INU pure inertial positions (displayed on Data Line 1 of each CDU).
5. REJECT (LS8) – Press (all INUs) to exit the freeze mode.
6. Plot the coast out fix and compare the positions.
7. Compare coast out fix with integrated position. Enter both the coast out fix and integrated position points as waypoints to determine distance between them. Record as a Delta.
8. Record altimeter readings for pilot, co-pilot, and SAI when level.

10.2.4.2. Ten minutes after each oceanic waypoint use MARK key to record your position IAW AFI 11-2C-5, Volume 3, paragraph 11.4.1.2.3. Your position is immediately available in the scratchpad, or to view your markpoint history, press the EDIT key, scroll down once, then select MARKPT (LS1). Accessing the LOCK/ZERO page under the IDX key will allow you to clear the entire history.

10.2.4.3. Periodically review the GPS Integrated Navigation Page (INAV Key press and then laterally scroll, as required, to page with satellite information) to ensure the 95% probable error is within tolerance for the type airspace you are flying in, i.e., RNP -5.

10.2.4.4. Be aware that ETAs shown on both the Oceanic and Flight Plan pages are only accurate to the "TO" (next) waypoint unless wind data has been input manually.

**10.2.5. XTK/WAYPOINT ALERT.** Use the procedures in [Table 10.2.](#) on all operational missions to receive XTR and WAYPOINT ALERT messages once established on flight plan route.

**Table 10.2. XTK/WAYPOINT ALERT Procedure.**

- |  |
|--|
| <ol style="list-style-type: none"> <li>1. IDX Key - PRESS</li> <li>2. LS3 (NAV CONFIG) - PRESS</li> <li>3. "2" key - PRESS</li> <li>4. LS1 (XTK ALERT) - PRESS</li> <li>5. "1", "2", "0" keys - PRESS</li> <li>6. LS2 (WPT ALERT) - PRESS</li> </ol> |
|--|

10.2.5.1. This will give a blinking XTK ALERT message on the CDUs when the airplane is 2 NMs off course; however, there will NOT be an illuminated CDU MSG light on the FMS/INS status panel. This alert is not clearable until the airplane has returned to the set parameter.

10.2.5.2. Entering 120 will cause the WAYPOINT light on the FMS/INS status page to illuminate 2 minutes prior to approaching the next waypoint.

**10.2.6. INS Procedures.** An INS with an error rate exceeding 2.5 NM per hour requires an AFTO Form 781A, **Maintenance Discrepancy and Work Document**, write-up to include the time operated in NAV mode, total error, error rate, and any malfunction codes. If the error rate exceeds 2.5 NM on two successive legs, the INU is considered to have failed.

**10.2.7. Mission Records.** The mission records in [Table 10.3.](#) will be returned to squadron DOV and maintained for 90 days. Annotate each document with the date, aircraft commander's name, and departure/destination bases:

**Table 10.3. Required Mission Records.**

- |   |
|---|
| <ol style="list-style-type: none"> <li>1. TAFB Form 73, <b>Mission Itinerary</b>.</li> <li>2. Low-level chart or charts for any low level sorties.</li> <li>3. Plotting chart(s)/map(s) for each CAT 1 route.</li> <li>4. AF Form 4054, <b>Performance and Fuel Management Log</b>.</li> <li>5. AF Form 4053, <b>INS Flight Plan and Log</b> (fuel plan) or AF Form 4052, <b>C-141/C-130/C-5 Refueling Computation</b> (A/R fuel plan) as appropriate.</li> <li>6. Computer Flight Plan (CFP), or manual flight plan if appropriate.</li> <li>7. ORM worksheet. This worksheet is only required if ORM is used to justify a change in mission itinerary or departure time.</li> </ol> |
|---|

**10.2.8. Passenger Oxygen Masks Inspection/Installation.** If masks have been deployed they will be cleaned, inspected, and reinstalled at the next enroute station. If passengers used the masks and the station does not have environmental systems or life support personnel, then the aircrew shall contact AMC/DOV for a course of action (wait for recovery team, no passengers, etc).

**10.2.9. Aircrew Arming/Security.** When mission itineraries require the aircrews be armed, squadrons will be notified via MIS by 60 OSS Current Operations (60 OSS/OSO). To allow aircrew preflight to start earlier in the launch sequence, 60 OG and security forces armory personnel have instituted the following aircrew arming procedures:

10.2.9.1. The Travis Command Post representative will call the armory as soon as a mission is alerted, advise them a crew arming requirement exists, and provide the number of weapons required and approximate arrival time of the crewmember. The attendant will fill out the AF Form 1297, **Temporary Issue Receipt**, and load the required weapons and ammunition into a gun box.

10.2.9.2. A crewmember will go to the armory and present his/her AF Form 522A, **USAF Ground Weapons Training Data**, and ID card. When 16 or more weapons are to be picked up, two crewmembers need to be armed. Berettas (9MM) are classified as low risk weapons. The weapons and ammunition will be transported to the aircraft in the gun box. Aircrews have priority for weapons issue and may move to the front of the line. First come, first served will apply for weapons turn-in. These procedures may be used for any mission requiring arming.

10.2.9.3. Weapons transported in the gun boxes will be loaded (magazine inserted with a round in the chamber) with the safety lever on safe (9MM) and placed in the gun box by the security forces. Armed crewmembers will ensure weapons are carried with the safety off.

10.2.9.4. If the aircrew is required to load a weapon, use a clearing barrel if available. If the aircrew is required to load and chamber a weapon at the aircraft, move a safe distance away from the aircraft (at least 50 feet) and ensure weapons are pointed away from personnel, vehicles, and the aircraft before loading and chambering a round.

**10.2.10.** From 15 October through 15 April, crews transiting a cold weather area should consider carrying cold weather gear. Use good judgment as to what constitutes a cold weather area. All Alaska bases are considered cold weather areas. Also, consider alternate/divert locations when you think about whether or not to take the gear.

### **10.3. Transition Training.**

**10.3.1. Familiar Airfields.** The following airfields are available for transition training. The aircraft commander will review NOTAMs, IFR Supplement, AP/1, and the Airfield Suitability Report and Restrictions (ASRR) for the transition field. Aircraft commanders will consider training requirements, weather, and sortie duration when selecting an alternate training field. Request extension to scheduled sortie duration from Travis Command Post (TCP). Advise TCP of intentions prior to departing the Travis pattern.

10.3.1.1. Travis AFB. There is a priority system during periods of limited aircraft in the pattern (see [Table 10.4.](#) and [Table 10.5.](#)). If there is a conflict concerning the number of aircraft in the pattern, ATC will send one aircraft into holding, and inform TCP of the situation. TCP will contact aircraft in the pattern to determine priority and inform ATC of the lowest priority aircraft. The aircraft with the lowest priority will make intentions known to ATC and TCP (full stop, depart area, hold, or full stop to taxi-back). If departing Travis due to pattern saturation, advise TCP of intentions.

**Table 10.4. Travis Transition Priority.**

Priority 1	Pilot check rides in progress
Priority 2	Formal School Training (CCTS, Active Duty and Reserves)
Priority 3	Aircraft scheduled for local transition training
Priority 4	Aircraft scheduled for off-station transition
Priority 5	Transient aircraft performing practice approaches

**Table 10.5. Travis Transition Window.**

0600 - 0659L	Takeoffs to depart the area and full stop landings only
0700 - 0729L	Takeoffs to depart area or to VFR pattern. VFR pattern maximum of three aircraft
0730 - 2259L	Maximum of 4 aircraft in VFR/Radar pattern combined (Except during the BASH window, ref paragraph 10.15.)
2300 - 2359L	Maximum of three aircraft in VFR/Radar pattern combined
0001 - 0559L	Maximum of two aircraft in VFR pattern

10.3.1.2. Beale AFB. Transition training is permitted on a case-by-case basis. The PAR is not normally available on weekends and after 2200L during the week. Do not over fly the Pave Paws radar site east of the field. Coordinate with Beale Command Post.

10.3.1.3. Sacramento International Airport (SMF). Available between 0700L and 1900L, Monday through Friday only. Only one heavy aircraft at SMF at a time. Approach work is limited to one hour total in the radar and/or VFR pattern maximum. Do not overfly the tower and passenger terminal areas. Circling maneuvers for training are not authorized. Plan instrument approaches to 16L/34R when available. If non-precision approaches are flown, plan your arrival at MDA to avoid prolonged low altitude flight at high power settings. When executing climb out from an IFR or VFR approach (Runway 16R), start your turn immediately after crossing the I-5 freeway to cross the river south of the I-5 bridge. Coordinate with TRACON to fly a flight path west of the homes located along the river. Call Sacramento TRACON (916) 922-9511, extension 222 prior to departing Travis to determine SMF arrival/departure workload limitations. Aircrews are limited to a MAXIMUM of one hour in the pattern and must avoid overflying residences along the river to the west. Pilots are responsible for monitoring time in traffic and departing the airfield after reaching the one-hour time constraint. ATC controllers may be willing to clear you for more than the allotted time. Do not construe this as approval to disregard 60/349 OG guidance.

10.3.1.4. Stockton Airport. Pre-coordination with the Stockton Airfield Manager must be accomplished. Unannounced arrivals will be directed elsewhere. Plan for only 1 to 1 1/2 hours of transition training at Stockton. Only one C-5 or KC-10 is allowed in the Stockton radar pattern at a time. Expedite climb for noise abatement. Remain at or above 1,500 feet within 15 NM of Sharpe AAF (4 1/2 miles south of the airport). Do not over fly San Joaquin General Hospital (1 1/2 miles northwest of the airport) or the city of Manteca (2 miles south of the airport). Transition is authorized only on Runway 29R.

10.3.1.5. Edwards AFB, CA.

10.3.1.6. Vandenberg AFB, CA.

10.3.1.7. Lemoore NAS, CA (Contact Lemoore Approach Control).

10.3.1.8. Fallon NAS, NV (Contact Fallon Approach Control).

10.3.1.9. Palmdale (AF Plant 42). Runway 25 is approved for IMC and nighttime operations provided the ILS is operational and flown. Runways 4, 7 and 22 are restricted to Day/VMC operations.

10.3.1.10. Sacramento Mather Airport (MHR). Available between 0700L and 1900L, Monday through Friday only. No more than one heavy aircraft at MHR at a time. Approach work is limited to one hour total in the radar and/or VFR pattern maximum. No more than two touch and go landings per aircraft due to deteriorating runway pavement. Do not overfly the tower. Delay configuration on instrument approaches (but maintain within safe parameters at all times). C-5s will further minimize noise impact by flying instrument approaches at 40% flaps. KC-10s will not perform '50 flap' approaches. Flap configuration in the VFR pattern is not restricted unless flying a significantly extended pattern (final longer than 3 miles.) Circling maneuvers for training are not authorized. If non-precision approaches are flown, plan your arrival at MDA to avoid prolonged low altitude flight at high power settings. When intercepting final for the ILS/visual Runway 22L approach, plan your turn to intercept final at or south of US 50. Avoid overflying residential areas north of US 50. Call Sacramento TRACON (916) 922-9511, extension 222 prior to departing Travis to determine MHR arrival/departure workload limitations. Aircrews are limited to a MAXIMUM of one hour in the pattern and must avoid overflying noise sensitive areas to the north and northeast of 22L final approach course. Pilots are responsible for monitoring time in traffic and departing the airfield after reaching the one-hour time constraint. ATC controllers may be willing to clear you for more than the one-hour time constraint. Do not construe this as approval to disregard 60/349 OG guidance.

**10.3.2.** Transition Training At Other Than Above Locations: 60 OG/CC (349 OG/CC AFRC) or designated representative must approve transition training at airfields other than those listed in paragraphs [10.3.1.1.](#) through [10.3.1.10.](#)

**10.3.3.** Landing Restrictions.

10.3.3.1. Normally local training missions will full stop only at Travis AFB.

10.3.3.2. Minimum runway length for touch-and-go landings is 8,000 feet.

**10.3.4.** Unauthorized Transition Airfields. Transition training is not authorized within San Francisco Class B Airspace, to include the following: Metropolitan Oakland International, Moffett Field, and San Francisco International.

**10.3.5.** PEN/QEN 305/309 Missions. The primary purpose of 305/309 missions is enroute training and familiarization. PEN/QEN missions will be planned IAW Part 1 of the Travis AFB 6 Month WOP. Engine out/non-standard configuration training on these missions should be minimized and will be conducted IAW AFI 11-2C-5, Volume 3, Chapter 9. TACC may not monitor PEN/QEN missions, therefore crews must contact TCP with take-off/landing information.

**10.3.6.** Manual Gear Lowering. Manual gear lowering for training/evaluation is a simulated emergency procedure and will be conducted IAW AFI 11-2C-5, Volume 3, Chapter 9, and will only be conducted on Local or PEN Training Missions. An instructor or evaluator flight engineer is required to monitor the manual override procedure at the gear manifold. Manual gear lowering should not be initiated with less than 30,000 pounds of fuel onboard.

**10.4.** Local Training Procedures.

**10.4.1.** Local Mission Cancellation/Termination. Instructor aircraft commanders (IACs) must coordinate with squadron leadership (operations officer for active duty; not applicable for Reserves) and TCP to cancel local training flights. All options must be verified and exhausted prior to cancellation; consideration to



such things as maintenance spares, weather, training requirements, and currency. Coordinate early termination through TCP. Sorties may be terminated prior to scheduled duration if training is complete. IACs will obtain approval from TCP if they wish to continue flying beyond the specified block time. (Exception: 349 OG locals will terminate transition training NLT 2300L unless prior approval is granted by 349 OG/CC.)

**10.4.2. Monitoring Travis Command Post Radios in the Local Pattern.** Crews will monitor TCP's VHF frequency (141.9) in-flight (normally a crewmember other than the pilots in primary crew positions). If TCP needs to contact a crew in flight, they will do so on VHF. Phone patch capability is also available on this frequency. Any calls initiated by the crew, such as block times, MX status, checking on tanker status, etc., will be made on UHF.

**10.4.3. Use of Secure Voice with Travis Command Post.**

10.4.3.1. HAVE QUICK (P260) and Secure Voice (P270) training is best accomplished on scheduled local training missions. Unauthorized UHF frequencies will not be used to conduct HAVE QUICK and/or Secure Voice training (e.g., 300.0 or 300.025) IAW Federal Communication Commission (FCC) regulations. Travis has the frequencies 311.0 and 321.0 available for this training. Requests to use other frequencies will be submitted through the proper channels.

10.4.3.2. All locals should load secure voice to complete currency requirements as well as gain competency. Attempt secure voice contact with TCP using procedures in [Table 10.6](#) during a non-critical phase of flight. This could be your departure call or your 30 minutes prior to landing call. If TCP is unable and time permits, attempt contact with another Travis aircraft.

**Table 10.6. Secure Voice Check with Travis Command Post.**

- |  |
|--|
| <ol style="list-style-type: none"> <li>1. Crewmember will call TCP with the statement, "Command Post, call sign, go Green," on 349.4.</li> <li>2. Command Post, "Call sign, Command Post going Green." At this time, switch to Secure mode on frequency 311.0. Expect a slight delay as the Command Post controller walks to the secure radio in back room.</li> <li>3. Command Post (on Secure Radio freq 311.0), "Call sign, go ahead with your message."</li> <li>4. Pass message (Secure 311.0).</li> <li>5. Command Post (Secure 311.0), "Call sign, copy your message, Terminate Green."</li> <li>6. Switch back to non-secure mode on the radio and back to 349.4.</li> </ol> |
|--|

10.4.3.2.1. This will terminate the secure portion of the departure message. Subsequent calls between aircraft and TCP will normally be in non-secure mode.

10.4.3.2.2. The intent is to get both aircrews and controllers familiar with radio operation in secure mode without making additional calls.

**10.4.4. Traffic Advisory Procedures for Travis TACAN A and B Approaches.** All aircrews flying the Travis TACAN A or B approaches (or otherwise operating in the vicinity of Rio Vista Airport) will make every effort to self-announce their aircraft position and/or intentions on the UNICOM frequency. Example: (called in-the-blind on 122.8 approaching lead radial to final approach course on TACAN-A) "Rio Vista traffic, Fred 52, heavy C-5, two miles south of Rio Vista airport, 3,000 feet, descending to 1,800 feet, turning west bound to Travis AFB, for Rio Vista traffic." Try to use generic VFR terminology to relay your position relative to Rio Vista Airport. Any negative impact or distraction from performing nor-

mal crew duties by making this advisory call should be held to a minimum. The use of an additional crew-member may be the most appropriate means to accomplish this.

**10.4.5. Mid-Air Collision Potential.** The heavy congestion of the Travis traffic pattern requires extreme vigilance from every crewmember. High volume VFR traffic to and from airports in the area and along I-80 requires dedicated clearing. Sailplane flights along the Vaca Hills up to 6,000 feet MSL are common. Activity increases on weekends.

**10.4.6.** If more than one pilot will be in command, each will list his or her name on and sign the DD Form 175, **Military Flight Plan**.

**10.4.7. Weight and Balance.** Crews will review pre-computed DD Form 365-4, **Weight and Balance Clearance Form F**, in Base Operations Flight Planning or at the squadron FCIF Library. A flight engineer or loadmaster will complete a new DD Form 365-4 for missions with fuel or aircraft configuration different from the pre-computed DD Form 365-4.

**10.4.8. Loadmasters on Local Training Missions with Cargo.** All local C-5 missions with cargo, including ballast pallets, require a loadmaster to fly with the mission IAW AFI 11-2C-5, Volume 3, Figure 3.1. This policy does not apply to SCM aircraft locals with one ballast pallet on board.

**10.4.9. Seat Changes.** Seat changes for primary crewmembers will not begin on departure until the aircraft reaches 1,000 feet AGL, and will not be made during flap extension or retraction.

**10.4.10. Jump Seat Duties.** A minimum of three pilots will be scheduled on local training missions. The third pilot will occupy the jump seat, maintain outside vigilance and monitor flight progress, aircraft configuration, checklist completion, wing tip clearance, and any other items relating to safety. Should the third pilot need to be cancelled from a local, the decision to fly or cancel will be coordinated with the squadron operations officer. An engineer may occupy the jump seat to accomplish annual TERPS requirements.

**10.4.11. Radio Terminology.**

10.4.11.1. Standard Departures. ATC will use the term “*Standard Two Departure*” or “*Standard Four Departure*” for inter- and intra-facility coordination and as a departure clearance, alternate missed approach or climb-out instructions.

10.4.11.1.1. Standard Two Departure. Climb and maintain 2,000 feet, fly runway heading, departure frequency local channel six.

10.4.11.1.2. Standard Four Departure. Climb and maintain 4,000 feet, fly runway heading, departure frequency local channel six.

10.4.11.2. “*To Follow*” and “*Traffic Is*” is terminology used frequently by Travis Approach Control/Tower to convey your position in traffic sequencing. You will always be turning behind the traffic, regardless of runway, *unless* specifically cleared otherwise (e.g., terminology such as “traffic is...turn inside that traffic”). The following clarifies the two phrases:

10.4.11.2.1. To Follow - Informs a pilot to follow an aircraft that is making an approach to the *same* runway. Example: “Fred 42, number two *to follow* a heavy C-5, four mile final, runway 21L. Report base behind that traffic.” Your instructions are that you are number two behind a C-5 to the same runway, 21L.

10.4.11.2.2. Traffic Is - Informs a pilot to follow an aircraft that is making an approach to a *different* runway. Example: “Fred 33, you are number one, 21L, *traffic is* a heavy C-141, five mile final 21R. Report



base 21L behind that traffic.” You are the first airplane to 21L but will turn behind the C-141 going to 21R.

#### **10.4.12. Thunderstorm and Lightning at Travis AFB.**

10.4.12.1. In accordance with TAFBI 15-101, *Weather Support*, and AFOSH Standard 127-100, *Aircraft Flight Line - Ground Operations and Activities*, the Travis Base Weather Station will issue the following thunderstorm and lighting activity weather information through TCP, tower and ATIS:

10.4.12.1.1. Weather Watch for Lightning will be issued 30 minutes prior to thunderstorm activity within a 5 NM radius of Travis AFB.

10.4.12.1.2. Weather Warning for Lightning will be issued when lightning is observed within 5 NM of Travis AFB.

10.4.12.2. During a Weather Warning for Lightning, personnel in affected locations will cease all outside activities and seek shelter. Enclosed aircraft, buses and other vehicles with metal tops and bodies are considered suitable shelter during thunderstorm activity. Wheel wells are extremely hazardous during thunderstorms and should be avoided.

10.4.12.3. When lightning is within 5 NM, maintenance will stop all flightline operations and will evacuate the flightline until termination of the lightning hazard. Furthermore, POL will cease all fueling operations. Crew chiefs that are on the aircraft may stay onboard the aircraft and remain inside until termination of the lightning threat.

10.4.12.4. Aircrews that have not arrived at the aircraft will remain indoors or in the crew bus until the lightning threat passes. Crews will be notified of the lightning threat by the most expeditious means (e.g., maintenance truck, crew chiefs, command post). If already at the aircraft, the crew will remain in the aircraft with all doors closed and at least one door armed for emergency evacuation. The crew may continue interior preflight duties (up to engine start) while awaiting lightning hazard passage. In the event an aircraft lands during lightning threat periods, the tower will direct taxi operations. The crew can expect parking delays upon clearing the runway.

10.4.12.5. When operating at other airfields, aircrews will comply with the more restrictive of these procedures or local operating procedures.

#### **10.5. Aircrew Procedures.**

**10.5.1. Controlled Takeoff Times.** Aircrews will coordinate with TCP for controlled takeoff times. Missions falling behind the pre-launch sequence of events will coordinate takeoff priority with ground and tower control through TCP in an effort to obtain an on-time departure.

**10.5.2. Abort Procedures.** After an aborted takeoff, clear the runway (if safe to do so), set the parking brake (brake temperature permitting), and check all tire and brake assemblies. Consideration should be given to placing chocks on the nose gear. Under no circumstances will the scanner approach the brake assemblies from the side.

**NOTE:** Aircraft commanders should use careful judgment when directing inspection of the gear/brakes. Directing the scanner into the wheel well poses some hazard in itself. Peak temperatures occur 15 to 30 minutes after brake application and additional heat will build up during taxi. Keep taxi speed down, especially in turns. If any brake assembly is significantly hotter or cooler than others, the brakes should be rechecked prior to subsequent takeoff.

**10.5.3. Aircrew Considerations Following an Emergency.** The following techniques are provided for your consideration in establishing your plan of action following any airplane-oriented emergency. Establish an escape route. Maintain positive control of surviving aircrew/passengers. 60 OG/OGV suggests clearing the aircraft a minimum of 600 feet. Perform a head count. Establish a priority for treating the injured. Report location of fire or emergency, state of evacuation (possible survivors on board), and hazardous material carried and location to the Fire Chief as soon as practical. Know your procedures for evacuation and plan ahead.

**10.5.4. Use of UHF Radios.** UHF radio frequencies should be used to the maximum extent possible when operating at military installations. This does not preclude the use of VHF radios when specifically assigned one by ATC, nor does it preclude VHF radio use for safety reasons, training, etc.

**10.5.5. Movement of Personnel Between Flight Station and Troop Compartment.**

10.5.5.1. The flight engineer will monitor movement of personnel in the cargo compartment with a check in/out procedure. Individuals will check with the flight engineer before movement and they will inform the engineer that they have reached their destination. The engineer will notify the pilot that personnel are enroute to/from the troop compartment. The pilot will prohibit movement through the cargo compartment if it is not safe.

10.5.5.2. A headset will be worn by crewmembers while transiting the cargo compartment in-flight to allow immediate access to the airplane interphone system.

**10.5.6. Center Wing Barrier.** The insulated center wing barrier between the center wing section rear spar compartment and the troop compartment will be fully installed for flight. This ensures protection for the passengers and containment of fluids/FE 1301 in the event of a fire. Do not carry passengers unless the barrier is fully installed.

**10.5.7. Towing Procedures.** If towing of the aircraft is required, and the aircrew pre-flight has been started, comply with Push back/Tow procedures in 1C-5A-1, section 2A. Advise the maintenance tow team supervisor not to commence towing until required aircrew checklists have been completed and the aircraft commander is ready. All primary crewmembers will be in their seats for the towing.

**10.5.8. Oxygen Duration Chart Clarification.** For planning purposes, enter the crew regulators on 100 percent oxygen duration chart, with a maximum of five crewmembers. Figure remaining crewmembers and passengers on continuous flow chart.

**10.5.9. Formula for computing Average Gross Weight for Range Computations.** Average Gross Weight = zero fuel weight + fuel required overhead +  $\frac{1}{2}$  fuel for the period. Fuel for the Period = fuel on board minus fuel required overhead.

**10.5.10. Pilots will not perform duties or maneuvers in the aircraft which are authorized for the next higher crew qualification level until officially beginning formal upgrade training (i.e., Flight Safety course).**

**10.5.11. AR qualified ACs will make contacts only from the left seat. On operational missions, the "A" coded aircraft commander will occupy the copilot seat when allowing other current AR/ACs or AR/FPs to refuel from the left seat for currency. Current AR/IPs or AR/EPs may refuel from either seat for currency. Exceptions: See AFI 11-2C-5, Volume 3, paragraphs 3.1. and 5.2.**

**10.5.12. Flight Engineer Requirements.**

10.5.12.1. A second engineer graduating from Flight Engineer Initial Qual Course (FEIQ) is considered basic qualified. Within 15 days after arriving at Travis the second engineer is required to accomplish a Second Engineer Sortie, if current. A safety observer is required to monitor the second engineer performing those duties to ensure safe, timely accomplishment of those duties. The safety observer will have a crew qualification of MF or higher. This sortie does not constitute the start of training and an AF Form 4023, **Aircrew Training Progress Report**, entry is not required.

10.5.12.2. Ground Refuel Qualification - Flight engineers are CSS qualified.

**10.5.13. Loadmaster Requirements.** HQ AMC policy requires two mission-qualified loadmasters to occupy the troop compartment for all critical phases of flight when any number of passengers is carried in this compartment. A loadmaster is required when MEGPs are onboard.

**10.5.14. Flying Crew Chiefs (FCC):**

10.5.14.1. FCCs report to the aircraft commander during travel and will stay with that crew if the aircraft is staged.

10.5.14.2. Ensure adequate rest. Include FCCs in the work-rest plan and allow them to use in-flight crew rest facilities when necessary. During aircraft debrief, the aircraft commander will coordinate with the FCC and maintenance supervision on how long the FCC can safely work. This is especially important for augmented duty days or crew-staged operations. Rest periods may only be interrupted for necessary questions concerning the airplane maintenance history.

10.5.14.3. If ground time exceeds 16 hours, a work-rest plan (not to exceed a 12-hour work cycle) will be established by the AC and local senior maintenance supervisor. Ensure adequate rest before departure.

10.5.14.4. FCC duties away from home station include:

10.5.14.4.1. Ensure aircraft is maintenance ready.

10.5.14.4.2. Inspects, maintains, services, and prepares the aircraft for its next departure.

10.5.14.4.3. Participate in maintenance debriefings with the aircrew.

10.5.14.4.4. Assist maintenance recovery teams.

10.5.14.5. At AMC enroute stations, FCCs will advise the maintenance line supervisor when leaving the work area and keep Maintenance Control/AMCC informed of location.

10.5.14.6. Aircraft commanders will report FCC performance on 60 AMW Form 222, **Dedicated Crew Chief Evaluation**.

**10.5.15. Off-station Logistics Support.**

10.5.15.1. The TACC Logistic Group Readiness Control (LGRC) is the AMC logistics component of the command and control system working in unison with the director of operations and mission management. TACC/LGRC will support all C-5 aircraft requiring mission support away from home station.

10.5.15.2. For operational matters, the appropriate TACC/XOC geographical cell will be contacted. For logistics support call LGRC. When at non-AMC locations, direct contact with TACC is appropriate. LGRC will evaluate and pass information (i.e., request for parts, MRT, or equipment) to the home station through the appropriate base Maintenance Airlift Control Center (MACC) that is tasked to support the aircraft recovery.

10.5.15.3. LGRC has overall responsibility for the recovery of not mission capable (NMC) aircraft from the time of notification until the aircraft is in the "green." Therefore, aircrews must keep LGRC informed on all matters regarding maintenance status, recovery options, and actions. Allow LGRC the opportunity to aid in resolving the problem.

10.5.15.4. Technical Assistance for any issue can be obtained through on-call personnel. Contact Travis Command Post for their assistance.

#### 10.6. Pre-Flight/Thru-Flight Guidance.

**10.6.1.** If the pre-flight team completes the inspection prior to the crew flying arrives, they do not have to wait. They will accomplish the After Landing, Engine Shutdown and Before Leaving Airplane Checklists prior to leaving the airplane. In addition, pre-flight teams will make an INFO write-up in the AFTO Form 781A to include the zulu date/time the pre-flight (to include AR pre-flight) was completed and items that could not be pre-flighted. They will also brief maintenance on any discrepancies discovered. If the flying crew shows prior to the pre-flight being completed, they will be debriefed and assume pre-flight duties. The 24-hour validity rule applies for aircrew pre-flight inspections. ERCCs are the only time a "face-to-face" is required.

**10.6.2.** Loadmasters are not considered part of the pre-flight team and are required to accomplish full pre-flight inspections.

#### 10.7. Procedures for Preparing an Aircraft for ALPHA Standby.

**10.7.1.** Aircrews will check/accomplish the items listed in [Table 10.7](#) to prepare an aircraft for Alpha standby.

**Table 10.7. ALPHA Standby Preparations.**

Pilots	Flight Engineers	Loadmasters
1. AFTO Form 781 and DD Form 365-4. 2. Oxygen masks. 3. Windows closed and locked. 4. Radios (UHF, VHF, and HF) Radar Altimeters and IFF. 5. INS/FMS Interface Check. 6. Waypoint and TACAN Data Loaded. 7. Weather Radar. 8. Publication currency.	1. Preflight. 2. TOLD card based on worst forecast weather (legal for alert plus 24 hours).	1. Preflight. 2. DD Form 365-4. 3. Seal the aircraft, so that unauthorized entry is detected. 4. Tape all doors (except crew entrance door) and hatches from the inside (1, 2, 3L & R, 4, 5, 6, 7L & R, and Negative Pressure Relief Doors). 5. Fleet supplies stowed.

#### 10.7.2. Leaving the aircraft cocked for an ALPHA alert departure:

10.7.2.1. Accomplish all checklists up to but not including the Before Starting Engines Checklist, then accomplish the items in [Table 10.8](#).

**Table 10.8. Departing a Cocked Airplane.**

<ol style="list-style-type: none"> <li>1. Turn FSAS/INS or FMS "Off."</li> <li>2. Disarm the Emergency Exit lights.</li> <li>3. Turn MADAR "Off."</li> <li>4. Shutdown the APUs.</li> <li>5. Place the APU/EXT PWR selector switch to "Off."</li> <li>6. Place the battery switch to "Off."</li> <li>7. Seal the Crew Entrance Door with a Metal Box Car Seal and document the number.</li> <li>8. Disconnect the external power unit.</li> <li>9. Leave Pro Gear on the aircraft</li> </ol> <p>NOTE: Turn the above items on and update when told to launch.</p>
---

10.7.2.2. Squadrons will review Travis AFBI 11-105, *Tanker And Airlift Standby Forces*, for billeting and transportation requirements. ALPHA crews will be quartered in Travis billeting upon entry into crew rest.

**10.7.3.** Released crews will accomplish the After Landing Checklist through Before Leaving Airplane Checklist.

#### **10.8. Engine Running Crew Change (ERCC) Procedures.**

**10.8.1.** Changes to the scheduled takeoff time are authorized and will be coordinated through TCP (or 60 OSS/OSO if one or more days prior) as soon as possible based on the amount of training time required.

**10.8.2.** First Half ERCC Crew. Immediately notify TCP of any discrepancy that might prevent the airplane from being operated by the second half crew. Plan to terminate no earlier than 30 minutes prior to the scheduled ERCC time. Early termination must be coordinated through TCP to ensure the second half crew is ready. Call TCP 30 minutes prior to landing with ETA, maintenance status and estimated landing fuel. The flight engineer will compute TOLD for the second period. Accomplish the After Landing Checklist (asterisk items only) and the Operational Stop After Landing Checklist. Stop at the ERCC spot designated in TAFBI 13-101, *Aerodrome Procedures and Air Traffic Control*, paragraph 1.22. or as directed by ground control.

**10.8.3.** Second Half ERCC Crew. The new aircraft commander assumes command after the crew has been briefed on aircraft status, one of the flight engineers is at the panel, one of the pilots is monitoring the brakes, and the exceptional release, if required, has been signed. TOLD will be checked by one of the second period pilots or flight engineers. The new scanner will accomplish a thorough walk around prior to replacing the first period scanner on the interphone cord. The second period crew begins with the Before Taxi Checklist (asterisk items only).

#### **10.9. Fuel Procedures.**

**10.9.1.** Minimum Fuel. "Minimum Fuel" will be declared when it is determined that an aircraft will land with less than 18,000 pounds of fuel. Declaring "Emergency Fuel" is at the discretion of the aircraft commander.

#### **10.9.2. AVCARD Procedures.**

10.9.2.1. Research the AVCARD Web site for "Government Into-Plane Contract" at all commercial locations to ensure the lowest rate available prior to landing at civil fields (addresses and phone numbers are available in the FCB).

10.9.2.2. The flight engineer accomplishing the interior inspection will brief the aircraft commander prior to takeoff that the AVCARD is on the aircraft (including locals). If the card is not present at home station, notify the maintenance supervisor. He or she will then either provide you with a new card or, as a minimum, a credit card number that you can use en route.

10.9.2.3. If the card is lost en route, make a “note” entry in the AFTO Form 781A. Include all relevant details (e.g., “BP vendor at EGPK [Mr. Driver] misplaced card. Ensuing search failed to recover card.”). If the card is missing from an aircraft, inform maintenance and document the missing card in the AFTO Form 781A, stating that it was missing upon your arrival at the aircraft. If the AVCARD is lost, misplaced or destroyed, contact the Wing Refueling Document Control Officer (WRDCO) immediately so the old card can be locked out of the system. In addition, call AVCARD and a technician will give you a card number to use for the remainder of the mission. Insure a new card is ordered upon mission return. Use the AF Form 315, **United States Air Force AVFuels Invoice**, or AF Form 15, **United States Air Force Invoice**, only as required at subsequent stops.

10.9.2.4. If you cannot obtain a card or a card number and the fuel vendor will accept nothing else, call TACC and inform them of your situation.

**10.9.3. AF Forms 15 and 315 Procedures (when not able to use AVCARD).**

10.9.3.1. TAFBI 23-102, *Aviation Fuels (AVPOL) Management Program*, contains guidance and instructions for using these forms. Aircraft commanders and flight engineers should review AFI 23-202, *Buying Petroleum Products and other supplies and Services Off-Station*, and TAFBI 23-102 to ensure they understand the proper procedures for completing and documenting aircraft fuel purchases. Guidelines for filling out the form are clearly written on the back of each form.

10.9.3.2. AF Forms 15 and 315 block 4 addresses and fund sites are listed in the FCB.

10.9.3.3. The aircraft commander or designated representative will sign Validating Official’s Certification block (25-29) on both forms. For aircraft not assigned to Travis, leave the fund citation and the Validating Official Certification blocks blank.

**10.9.4. AF Form 664, Aircraft Fuels Documentation Log Procedures.** Place receipts from the AVCARD, vendors, and all other fuel and ground service documents inside the AF Form 664 and return to the SRDCO for your respective unit. Ensure the front of AF Form 664 is filled out properly with one line entry per receipt. Number receipts to coincide with AF Form 664 line entry.

**10.9.5. In-flight Fuel Jettison:**

10.9.5.1. Fuel jettison is IAW prescribed technical orders and MAJCOM directives, and accomplished clear of populated areas. Aircrew will coordinate with Radar Approach Control/Oakland ARTCC for area and altitude in the local area.

10.9.5.1.1. If the emergency dictates, the recommended fuel jettison holding pattern instructions within Travis airspace boundaries are North-west of the SAC R-266/TZZ R-324, 4- minute (15 NM) legs.

**NOTE:** Altitudes 10,000 feet or below will allow aircraft to remain within Travis delegated airspace. Altitudes above 10,000 feet will require a clearance with Oakland ARTCC.

10.9.5.1.2. If the aircraft commander decides the emergency does not warrant jettisoning in the local traffic pattern, Radar Approach Control will vector the aircraft to W-513, west of Sausalito VORTAC. Oakland ARTCC will give clearance to enter. The coordinates for the center of this area are N37° 50.0’ W123° 30.0’. This area will keep the aircraft in the immediate vicinity of Travis; if the situation deteriorates fur-



ther, an eastbound turn will place the aircraft on final for San Francisco International Airport.

10.9.5.2. Procedures: Pilots will proceed to the selected fuel jettison area and determine if the airspace below is clear of traffic. When jettisoning fuel, aircrews must comply with AFI 11-2C-5, Volume 3, paragraph 5.18. Complying with these procedures fulfill all ARTCC restrictions and the fuel jettison procedures. Record fuel jettison data on AF Form 4097, **C-5 Fatigue Tracking Record**.

10.9.5.3. If circumstances prevent aircraft from utilizing the designated fuel dump area, every effort will be made (within safe operation) to dump off federal airways and away from urban areas, agricultural regions, or water supply sources.

#### **10.10. Crew Communications (COMSEC).**

**10.10.1.** For locals, crews will receive a loaded KYK-13 that includes: Mode 4, AMCTRN secure voice, and HQUS (for training only). Real-world Have Quick will not be loaded on outbound missions due to restrictions by AMC. Crews will not need a cable for locals, nor will they have to take a bag. Crews are not to take a local KYK-13 on an actual outbound mission.

**10.10.2.** For real-world missions, coordinate with Crew Comm 24 hours in advance; for weekend and Monday departures call NLT Friday 1200L. In the real-world kits, crews will receive a KYK-13, KOI-18 (loader), cable, the red book, and any other books the mission requires, along with the necessary disposition documentation.

**10.10.3.** HQ AMC requires all overseas missions to have Mode 4 (additional requirements are included in AFI 11-2C5, Volume 3, Chapter 6). Crewmembers picking up COMSEC from Crew Comm or Base Ops will have their ID card and flight orders available at pickup to help expedite clearance verification.

#### **10.11. Publications, Forms and Documentation.**

**10.11.1.** A current list of required publications for each crew specialty is listed in the FCBs.

#### **10.11.2. Unit Mission Kits.**

10.11.2.1. AMC mission kits carried on operational missions will contain the items in **Table 10.9**, in addition to the requirements stated in AFI 11-2C-5, Volume 3, paragraph 6.10.

**Table 10.9. Unit Mission Kit Additions.**

<ol style="list-style-type: none"> <li>1. <b>AMC Border Clearance and Customs Guide.</b></li> <li>2. AF Form 853, <b>Air Force Bird Strike Report.</b></li> <li>3. TAFB Form 73, Mission Itinerary. Reserve associate squadrons may substitute 349 AMW Form 12 in lieu of the TAFB Form 73.</li> <li>4. TAFB Form VR 7-96, <b>Mission/Simulator Accomplishment Report.</b> (60 OG Only)</li> <li>5. TAFBI 23-102, <i>Aviation Fuels Documentation.</i></li> <li>6. 60 AMW Monthly WOP</li> <li>7. 60 AMW Form 222, Dedicated Crew Chief Evaluation.</li> <li>8. AFTO Form 46, <b>Pre-positioned Life Support Equipment.</b></li> <li>9. Flight Crew Bulletin Vols I and III (60/349 OG) and current FCIFs (60 OG only).</li> <li>10. Squadron directed material.</li> </ol>
---

10.11.2.2. Local training missions, depot input missions, etc., may carry abbreviated trip kits with contents at the discretion of the squadron operations officer (349 OG/CC for AFRC). Disposition of completed forms will be as specified in AFMAN 37-139, *Records Disposition Schedule*.

**10.11.3.** Currency events accomplished on local training missions will be logged in AFORMS to reflect the appropriate Zulu date. Primary engineer/loadmaster will verify that their respective crewmember's Mission Accomplishment Report, AFTO Form 781, **AFORMS Aircrew/Mission Flight Data Document**, and TAFB Form 73 are filled out correctly and cross-referenced for accuracy. The aircraft commander will verify the accuracy for all crew positions, including the pilots.

**10.11.4.** AFTO Form 781 Procedures.

10.11.4.1. If ground time during a full stop/taxi back exceeds 0.1 hour (six minutes), a landing time will be entered on the AFTO Form 781 and a new line started for a subsequent takeoff.

10.11.4.2. Clearing Red X Symbols. 60 LG authorizes the primary flight engineer to clear Red X symbols on their airplane at enroute stations when qualified maintenance personnel are not available. The technician/crew chief accomplishing the work should sign the "Corrected By" block and the flight engineer should sign off the "Inspected By" block and initial the symbol. This authority is limited to those items listed in the exception to AFI 11-2C-5, Volume 3, paragraph 12.3. Clearance of any other Red X entry will require approval from the 60 LG/CC or designated alternate. Use call back procedures through Travis Command Post.

10.11.4.3. Mission Numbers and Symbols.

10.11.4.3.1. Mission symbol information changes frequently. The current monthly Wing Operations Plan (WOP) contains a matrix from which you can determine your mission symbol using your mission number. If launched from alert status, recut while off station, and/or not given a mission symbol, use this matrix to derive the correct mission symbol. You must have a valid 12-digit mission number to determine your three-digit mission symbol. Query command and control for this 12-digit mission number when recut. If you are unable to compute a mission symbol, call 60 OSS/OSO for further guidance.

10.11.4.3.2. Be aware the mission number and mission symbol on the flight authorization is normally for the first leg only. A common mistake is to use the same mission information for positioning, execution and deposition legs. Aircraft commanders will ensure the AFTO Form 781 is filled out correctly and completely.

10.11.4.4. Debrief Process. The following is a coordinated 60 and 349 OG/LG process to help eliminate problems with documentation of flying hours for both aircrews and airframes:

10.11.4.4.1. Aircrews will report to the respective Maintenance Debrief. Debrief will attempt to input all required data from the AFTO Form(s) 781 into G081 while the crew is debriefing the sortie. After AFTO Form 781 data is input into G081, Debrief will apply the proper MMICS number and initials on the original AFTO Form(s) 781 and return the AFTO Form(s) 781 to the crew. The crew will hand carry the AFTO Form(s) 781 to their respective operations squadron for disposition.

**NOTE:** Anytime a crew "deadheads" home with AFTO Form(s) 781 the crew shall take all original AFTO Form(s) 781 to Maintenance Debrief.

10.11.4.4.2. If Maintenance Debrief is unable to enter the AFTO Form(s) 781 data into G081 while the aircrew is debriefing maintenance, Debrief will make unofficial copies of the affected form(s) for the aircrew. Copies will be stamped in red ink "Unofficial copy-not for flight records use." Debrief will also annotate on the unofficial copy(s) the reason the data could not be entered into G081. If AFTO Form 781 data cannot be entered into G081 due to mission symbol/number conflict, the aircrew should attempt to correct the error. If the aircrew cannot resolve the conflict, Debrief and 60 OSS/OSO will coordinate to resolve the conflict during normal duty hours. Aircrew delays at Maintenance Debrief to process G081

should be kept to a minimum.

#### **10.11.5. AMC Form 97, AMC In-Flight Emergency/Unusual Occurrence Worksheet, Procedures.**

10.11.5.1. AFI 11-2C-5, Volume 3, paragraph 8.4., provides specific criteria on when to complete an AMC Form 97. The form is a tool used by commanders and safety personnel to report, investigate, and ultimately prevent mishaps. Although CCCs may use basic factual details for operational reporting, the AMC Form 97 is a limited use document and CCCs and commanders must protect information contained in the form (it may not be used for adverse action against a crew). IAW these regulations, report mishaps as soon as possible using guidance in [Table 10.10](#).

**Table 10.10. Mishap Reporting Procedures.**

<ol style="list-style-type: none"> <li>1. At airfields with an AMC flying safety officer (FSO), notify the FSO.</li> <li>2. At stations without an AMC FSO, notify the CCC duty officer or AMC liaison officer.</li> <li>3. At an Air Force base with no AMC function, contact base operations or the host base safety office.</li> <li>4. At other stations, relay necessary information to the nearest CCC.</li> <li>5. In all cases, retain a copy of all relevant information and turn it in to the 60/349 AMW/SE.</li> </ol>
---

10.11.5.2. 60 AMW and 349 AMW crews will adhere to the following guidelines:

10.11.5.2.1. Fax a copy to 60 AMW/SE and 60 AMW/CP as soon as possible.

10.11.5.2.2. 349 AMW crews will fax a copy to 349 AMW/WCC and 349 AMW/SE.

10.11.5.2.3. Notify TACC and your squadron commander or operations officer ASAP.

10.11.5.3. If unable to fax from the location of the incident, promptly fax at the first opportunity.

10.11.5.4. All reporting requirements, resulting from the incident, have shifted to the wing command post and other applicable agencies. The wing is now responsible for reports affecting Travis assigned aircraft and aircrews even if flying another wing's aircraft. Therefore any time a Travis crew is flying another wing's aircraft and an AMC Form 97 is required, use the notification guidelines in paragraph 11.5.1.2. and fax a copy of the same information to the command post of the wing owning the aircraft.

10.11.5.5. Compliance with the above procedures provides timely mishap reporting to commanders, enables 60 AMW/CP and 60 AMW/SE to accomplish necessary operational reporting, and initiates safety channel investigation and reporting to prevent mishaps.

#### **10.12. CAT II ILS.**

**10.12.1.** CAT II ILS approaches for training, evaluation, or currency may be credited without the auto-land system being operational as long as a coupled approach is accomplished. Unless all aircraft CAT II ILS equipment is operating, the approach will not count towards the three CAT II approaches an AC needs prior to accomplishing actual CAT II approaches when the weather is less than CAT I ILS minimums.

**10.12.2.** Actual CAT II ILS approaches are visibility only approaches and do not have a published ceiling. Visibility only fuel must be included in the fuel plan. Ensure you have 8,000 pounds of identified fuel prior to starting descent into your destination. A CAT II ILS current and qualified aircraft commander must occupy the left seat during actual CAT II ILS approaches when the weather is less than CAT I ILS minimums.

**Table 10.11. Additional CAT II ILS Procedures.**

1. The required advisory calls of "100 above" and "land" or "go around" are based on radar altimeters.
2. Set both radar altitude trip markers to the RA for the approach.
3. Set the pilot altitude command marker at DH; Copilot at 100 feet above DH.
4. Use the lowest RA if more than one is published (no lower than 100 feet).
5. Autoland lights may take up to 35 seconds to illuminate (-1 indicates 23 seconds).

**10.13. Functional Check Flight (FCF) Process.** (See AFI 11-2C-5, Volume 3, paragraph 5.21.) Travis aircrews are not qualified or allowed to perform FCFs. The procedures in [Table 10.12](#) will be followed at Travis AFB to request a crew to come to Travis to perform an FCF:

**Table 10.12. Requesting a FCF.**

1. 60 LG tasks 60 OSS/OSO with a requirement for a C-5 FCF.
2. 60 OSS/OSO will contact 60 OG/OGV with the requirement.
3. 60 OG/OGV will call 339th Flight Test Squadron DO and request they perform a FCF at Travis AFB.
4. 60 OG/OGV will provide 339th with aircraft tail number and the reason an FCF is required.
5. 339th Flight Test Squadron will make the arrangements for TDY to Travis.

#### **10.14. Defensive System Modified Airplane Procedures.**

**10.14.1.** The following information has been extracted from TAFBI 91-106, *C-5 Defensive System (DS) Flare Handling and Loading/Downloading Procedures*.

10.14.1.1. **Parking Restrictions.** The flares loaded in the visor will be considered forward firing ordnance when the visor is open. Non-essential personnel/equipment will not approach closer than 100 feet. Aircraft parked on spots adjacent to flare loading/downloading operations will not run engines, be serviced with liquid oxygen, or refuel/defuel.

10.14.1.2. **Fire Protection.** Fire symbol number three placards will be posted at the nose and tail of each flare-loaded aircraft.

10.14.1.3. **Aircraft Emergency with Flares Onboard.**

10.14.1.3.1. The minimum withdrawal distance if flares are involved is 600 feet.

10.14.1.3.2. Do not use halon fire extinguishers for fires involving pyrotechnics.

**10.14.2.** The following is guidance from 60 OG/OGV.

10.14.2.1. **Checklist Responses.** Pilot will state "Off" or "On" for MWS responses on modified airplanes or simulators.

10.14.2.2. **Operation Missions.**

10.14.2.2.1. Prior to departing on operational missions that require flares loaded on the airplane, the crew will receive a briefing from the Tactics Office on proper settings based on Theater SPINS.

10.14.2.2.2. Normally, the MWS should be turned on for the mission leg prior to any leg requiring its use. This allows an operational checkout and opportunity to repair any malfunctions noted. This does not preclude crews from turning the system on during other flights for training purposes. During flight, the MWS switch on the Counter Measures Dispensing Set (CMDS) CDU at the flight engineer's station will be OFF unless an actual threat exists.

#### 10.14.2.3. Safety Procedures.

10.14.2.3.1. Aircraft Commanders will ensure destination airfields are aware the aircraft has flares (1.3 explosives) as aircraft equipment. Each flare weighs 2 pounds; a full load of 72 flares is 144 pounds. (This number will be added onto the DD 365-4 as extra equipment.) Consider OPSEC requirements prior to announcing aircraft capabilities over the radio. (A remark in the AMC Form 59 may help convey this information.)

10.14.2.3.2. Under non-emergency conditions consult maintenance T.O.s prior to flare download

10.14.2.3.3. Crews will not floor load built up flares. Any flare transported inside the aircraft must be documented as hazardous cargo, and treated as such. (This is a change from the previous procedures where you could carry flares for your aircraft as aircraft equipment.)

10.14.2.3.4. While flares are being loaded into the dispensers ensure no other maintenance or loading operation is being performed, and only essential personnel are in the loading area.

#### 10.14.2.4. Inspection Procedures.

10.14.2.4.1. If flares have been dispensed during the flight, or if the counters indicate fewer flares than before takeoff, advise ground control of your requirement to check the flare dispensers.

10.14.2.4.2. Do not place the aircraft in a congested area. If possible, maintain a 600-foot separation from buildings and other aircraft.

10.14.2.4.3. Accomplish the Quick Stop Checklist and deplane the scanner to inspect the dispensers for hung flares.

**NOTE:** A DUD flare is one that failed to function and shows no signs of ignition. These are no more dangerous than loaded flares. A HUNG flare is one that failed to function properly and the ejection end shows evidence of flare material and a damaged/missing weather seal.

10.14.2.4.3.1. If there is no evidence of a HUNG flare, re-plane the scanner and taxi to parking. Document DUD flares in the AFTO Form 781A.

10.14.2.4.3.2. If there is evidence of a HUNG flare, notify the fire department and call for explosive ordnance disposal (EOD). Shut down the engines using normal checklists, and deplane the passengers/crew using exits away from the HUNG flare.

10.14.2.4.4. If flare operation was not attempted and the counters did not decrease, post-flight inspections are accomplished in parking.

**NOTE:** A missing weather seal from a flare is not considered HUNG unless a jettison signal was generated. However, the flare with a missing weather seal must be removed/replaced prior to next flight from a location with repair capability.

#### 10.14.2.5. Security Procedures.

10.14.2.5.1. Once the settings are programmed into the flare system, the tactics are classified.

10.14.2.5.2. Mode settings used during checklists responses are classified.

10.14.2.6. Required Flare Loads. The required quantity is three dispensings of flares from the aircraft. Since there are 12 dispensings available, this means each magazine must have a minimum of three flares. The aircraft commander must keep the current threat in mind when operating into threat areas with mini-

mum flares. Air Tasking Orders, Special Instructions, and other specific mission guidance may change the required quantity.

**10.15.** Travis Bird Aircraft Strike Hazard (BASH) Plan.

**10.15.1.** Reference 60 AMW OPLAN 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Plan*, NOTAMS, and FCIFs for current Travis AFB phase periods and BASH restrictions.

**10.15.2.** A significant bird hazard exists at Travis AFB. The hazard is a result of the close proximity to several wildlife refuges and the presence of landfill facilities 1.5 NM from the approach end of Rwy 03L and 4 NM from the approach end of Rwy 21L. The situation is compounded by the base's location along the Pacific Flyway and the associated populations of migratory waterfowl and shorebirds. Expect heavy bird activity year-round, with large numbers of geese and ducks during the winter months. Expect higher numbers of migratory flock movement around sunrise and sunset. Bird activity will also be higher during overcast and rainy weather. Crews will avoid over flying the Potrero Hills Landfills 1.5 NM southeast of Runway 03L.

10.15.2.1. Runway 03: If at all possible, plan circling approaches and VFR patterns to Rwy 3R. Circles and VFR patterns to Rwy 3L will avoid over flight of the landfill. If extending beyond the landfill while circling, use Cat E minima to ensure obstacle clearance.

10.15.2.2. Runway 21: If delaying a VFR closed pattern, extending upwind, or circling to Rwy 21L/R from a Rwy 3 approach, do not overfly the landfill.

**10.15.3.** Bird Hazard Condition (BHC) [Same As Bird Watch Condition (BWC)] Definitions. Visual sightings by aircrew, tower, base operations or safety personnel can initiate changes to the BHC. Listed below are standard BHC definitions and flight restrictions/crew actions that will be used at Travis AFB for all AMC aircraft to minimize the bird hazard to flight operations. Due to the transitory nature of BHCs, do not delay engine start or taxi for moderate or severe BHCs.

10.15.3.1. Severe - High wildlife populations (as a guide, more than 15 large birds [waterfowl, raptors, gulls, etc.] or 30 small birds [terns, swallows, etc.]) on or immediately above the active runway or other specific locations (taxiways, in-field areas, and departure or arrival routes) that represents a high potential for a strike. Keep in mind a single bird in a critical location may elevate the BWC to SEVERE. (Note: typically a temporary condition.)

10.15.3.2. Moderate - Increased wildlife population (approximately five (5) to fifteen (15) large birds or fifteen (15) to thirty (30) small birds) in locations that represent an increased potential strike. (**Note:** typically a temporary condition.)

10.15.3.3. Low - Sparse wildlife activity within 15 NM of the airport.

**10.15.4.** In addition to using good judgment, crews will take action according to [Table 10.13](#), based on the BHC.



**Table 10.13. Bird Hazard Condition Actions.**

Severe	Moderate	Low
<p>1. Flight operations are prohibited for all aircraft--all takeoffs, landings and approaches (deviations require 60 OG/CC or higher approval).</p> <p>2. Airborne aircraft: Contact ATC for instructions on holding if fuel/weather permit; otherwise plan on proceeding to alternate airfield. Keep 60 OG/CC informed if you have other risks to consider.</p> <p>3. Obtain estimated delay from ATC for bird dispersal or a return to a Moderate or Low BHC.</p>	<p>1. Takeoffs require 60 OG/CC approval from Travis AFB. If approved 60 OSS/AM will inspect rwy 20 minutes prior to takeoff.</p> <p>2. Full stop landings are allowed after AC assesses the risk of the bird hazard, fuel, weather, anticipated delay, etc.</p> <p>3. Transition training is prohibited (hold, divert, or full stop if safe to do so).</p> <p>4. Obtain estimated delay from ATC for bird dispersal or a return to a Low BHC.</p> <p>5. Aircraft on final should consider a go-around if location of birds warrant it.</p>	<p>Maintain vigilance.</p>

**10.15.5.** At non-AMC locations, the aircraft commander will determine the BHC using the guidelines in paragraph [10.15.3.](#) and comply with the restrictions in [Table 10.13.](#)

**10.15.6.** Aircraft will full stop to inspect all areas for damage following a bird strike. As a minimum, all engine inlets, engine fan blades, cooling air inlets, pitot/static inlets, and flight controls will be inspected for bird strike damage, regardless of the location of the known bird strike. All aircrews will fill out an AF Form 853, **Air Force Bird Strike Report**.

**NOTE:** Fill out AMC Form 97, AMC In-Flight Emergency/Unusual Occurrence Worksheet in addition to the AF Form 853 if the bird strike caused known or suspected damage. Be sure to inform maintenance and enter a write-up in the AFTO Form 781 for appropriate aircraft inspection.

#### **10.16. Kneeling Operations.**

**10.16.1.** All kneeling team members must be C-5 aircrew qualified and current, or under the supervision of an instructor or flight examiner. Exception: A qualified maintenance kneeling team member may be used in the right scanner position, provided an aircrew checklist is used and the left scanner verifies the correct placement of kneeling collars and chocks when required. All checklists must be current and compatible. The maintenance kneeling checklist, 1C-5A-2-1, is not compatible with the aircrew kneeling checklist and will not be used by any team member during aircrew kneeling operations.

**10.16.2.** A crew-in-place kneeling will be performed when arriving home station with cargo that requires kneeling for offload.

#### **10.17. Engine Running Off/On-Load (ERO) Procedures.**

**10.17.1.** Prior to any ERO operation, the aircraft commander will personally brief the crew of specific mission requirements and procedures. All troops, vehicle operators, personnel assisting in on/off load and crewmembers, except those on the flight deck, will wear ear protection at all times. Normally vehicle and pallet loads will not be combined for ERO operations.

**10.17.2.** The following procedures outline specific actions C-5 aircrew members should normally take to complete a well-planned ERO. These procedures are not designed to replace or change T.O. 1C-5A-1 *ERO, Operational Stop Procedures*, or *ERO Procedures Checklist*. They are designed to supplement, and more importantly, provide C-5 aircrews with standardized crew duties to successfully complete an ERO. Each crewmember will review ERO/Operational Stop Procedures, contained in AFI 11-2C-5, Volume 3, paragraph 5.26. and T.O. 1C-5A-1, including the kneeling/unkneeling operation. Additionally, pilots will review AFI 11-202, Volume 3, Chapter 3 for stopover flights.

10.17.2.1. Right scanner (R/S) departs aircraft with kneeling collars (if required). Left scanner (L/S) departs aircraft with NLG pin, kneel pad extend pin and strut limiter (if required).

10.17.2.2. Ensure the crew entrance door operating control knob is in the NEUT position prior to selecting ladder position. Failure to comply could injure the operator as the ladder begins to move.

10.17.2.3. Upon deplaning, L/S will position the crew entrance ladder selector to the desired kneeling mode (if required).

10.17.2.4. CLM retracts crew entrance ladder after the TALCE loadmaster and loading team boards the airplane.

10.17.2.5. INS selector switches will be positioned to NAV mode.

**10.17.2.6. Pilot states “Clear to open”. L/S ensures the visor area is clear and state, “Visor Clear”. CLM shall state, “Opening the Visor”. After visor is open, AC calls for kneeling checklist.**

10.17.2.7. TALCE loadmaster briefs CLM on the load and provides information to be transcribed in reference 13 of DD Form 365-4 (location, weight and moment).

10.17.2.8. If fumes enter the flight deck area, pilot and copilot side windows may be opened and oxygen used as required.

10.17.2.9. L/S checks that NLG strut extension pointer is on the green side of the torque link placard and installs the strut limiter (as required). R/S installs both left and right kneeling collars (as required).

10.17.2.10. When the aircraft is fully knelt, left scanner will ensure that the area is clear to deploy the ramp and states “Ramp is Clear.”

10.17.2.11. CLM deploys ramp/ramp extension.

10.17.2.12. R/S will visually inspect FWD ramp and ramp extension to ensure the ramp/ramp extension support pads are resting firmly on the ground.

10.17.2.13. If truck bed loading mode is used, L/S will assist the R/S in deploying the ramp support jacks.

10.17.2.14. L/S and R/S will move to respective sides of the FWD ramp, 25 feet forward, and monitor personnel/equipment movement. L/S should remain on interphone and keep pilot informed on on/off loading progress. R/S will disconnect (if required) at the aircraft (do not place the cord on the ground).

10.17.2.15. Ramp and door/unkneeling operation(s) may begin only after vehicle(s) are secured with a minimum of one chain forward and aft. Pallet loads will be secured in their final resting position.

10.17.2.16. Prior to closing the visor, L/S will visually inspect the ramp extension actuators to ensure that they are not damaged. He/she will also inspect the forward ramp ground support pads to ensure that they are perpendicular to the ground support pad links. Failure to comply could result in damage to the airplane.

10.17.2.17. Pilot calls for unkneeling checklist. During unkneeling, CLM inspects load placement, restraint, closes troop doors, and completes DD Form 365-4.

10.17.2.18. Immediately, after pilot calls for Unkneeling Checklist, the L/S will rotate the crew entrance ladder position selector to position 3.

10.17.2.19. The CLM lowers flight deck ladder (if required) and positions crew entry ladder, obtains the AC's signature and submits the original to TALCE. TALCE team departs aircraft. L/S and R/S board the aircraft.

## **10.18. Space Cargo MOD (SCM) Aircraft Procedures/Policies.**

**10.18.1.** The following applies when operating C-5C aircraft, tail numbers 80213 and 80216:

10.18.1.1. Unpress Door Warning. According to Lockheed, if the aft door comes open in flight, it may be lost at any speed. If the aft cargo doors cause an "Unpress Door Open" light to come on accomplish the following:

10.18.1.1.1. If the light illuminates and stays illuminated: Land as soon as possible.

10.18.1.1.2. If the light illuminates and is intermittent: Land as soon as practical.

10.18.1.1.3. If performing transition training, land and do not continue until maintenance action has been performed.

10.18.1.1.4. If performing air refueling, do not attempt further contacts.

10.18.1.2. Additional T.O.s supplementing the current C-5 A/B dash one are required. Units will build mission kits with all publications required for an individual crew to operate a C-5C. C-5C mission kits will be picked up by the crew prior to beginning duties on C-5C aircraft and maintained on the aircraft until the mission is complete. Upon mission completion, the aircrew will return the C-5C mission kit to the point of origin. There will be two kits available from the 22 AS Mission Control, 21 AS Mission Control and 349 AMW Control Center.

10.18.1.3. C-5 qualified pilots and engineers are considered qualified on the C-5C. Loadmasters must receive special training on aft door operation before they are qualified to operate them.

10.18.1.4. Landing CG Limits. When operating with light cargo loads or an aft CG, tankering extra fuel may be necessary to maintain the airplane within CG limits. To insure the airplane remains within the acceptable CG limits, operational and local missions will terminate with 100,000 pounds of fuel or greater when there is no cargo or ballast pallet onboard.

10.18.1.5. When C-5C aircraft are used for line missions, loadmasters will utilize the forward door system to the maximum extent possible. Use of the aft door system will be limited to outsized cargo and requires a C-5C door qualified loadmaster. These procedures also apply to duty (launch) loadmasters.

## **10.18.2. Use of SCM Aircraft on Locals:**

10.18.2.1. On light AR's and 3- or 4-hour locals, there may or may not be a ballast pallet on board the aircraft. Local missions will originate with a 200,000-pound fuel load when the ballast pallet is not loaded to ensure the conditions in paragraph **10.18.1.4.** are met. There will be canned DD Form 365-4s for all configurations. A loadmaster is not required to fly on these locals.

10.18.2.2. When identified to fly as an ERCC, there will be a 4,900-pound ballast pallet loaded.

10.18.2.3. The launch/duty loadmaster will load the ballast pallet through the nose of the aircraft and secure it in pallet position number 4. Pallet stops will be placed just aft of the ballast pallet and stow the roller conveyors in pallet positions 6 and 8. He/she will then enter in the AFTO Form 781A that the pallet has been loaded and restrained IAW current directives. Upon arrival at the aircraft, the flight engineer/scanner must ensure that the ballast pallet is restrained IAW the above procedures. If the flight engineer/scanner finds that these procedures have not been complied with, he/she can either correct the problem, or contract TCP to call for the launch/duty loadmaster to correct the problem. Checking ballast security must be a priority for flight engineers and scanners to provide time for the launch/duty load to respond. The flight engineer/scanner remains responsible for checking the security of the pallet prior to and during the flight. Loadmasters are required to fly on any aircraft accomplishing heavy AR training.

**10.18.3. Space Cargo Transportation System (SCTS) Missions.**

10.18.3.1. The sensitivity of the SCTS missions requires highly qualified, experienced aircrew members with at least one instructor, or higher, in each crew position. Loadmaster manning must include four SCTS qualified and two line assigned (line assigned loadmasters should be identified for future SCTS crew qualification). Squadrons will select only those crewmembers who meet these standards. When an instructor or SCTS qualified crewmember is not available, the squadron operations officer or commander will contact the operations group commander for waiver of this requirement.

10.18.3.2. It is highly recommended that the crew preflight the SCM external power receptacle at home station by connecting a power unit and checking illumination of the SCM EXT PWR light. In addition, check that the nitrogen FSS left and right pressure limiters are in the NORMAL (up) position. The limiters are not accessible with the SCTS container loaded.

10.18.3.3. The thrust reversers should not be used in-flight due to pressurization fluctuations on SCTS equipment.

10.18.3.4. Six loadmasters may log sorties and primary time in the AFTO Form 781 when the SCTS is on board.

10.18.3.5. Two crew chiefs will fly on all SCTS missions.

**Attachment 1 (Added)****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

**NOTE:** This information supplements that in Attachment 1 of AFI 11-2C-5, Volume 3

AFMAN 37-139, *Records Disposition Schedule*

TAFBI 11-105, *Tanker and Airlift Standby Forces*

TAFBI 13-101, *Aerodrome Procedures and Air Traffic Control*

TAFBI 15-101, *Weather Support*

TAFBI 23-102, *Aviation Fuels Documentation*

TAFBI 91-106, *C-5 Defensive System (DS) Flare Handling and Loading/Downloading Procedures*

60 AMW OPLAN 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Plan*

60 AMW Wing Operations Plan

60 OG Flight Crew Bulletin

***Abbreviations and Acronyms***

**CDU**—Control Display Unit

**ERCC**—Engine Running Crew Change

**FMS**—Flight Management System

**INU**—Inertial Navigation Unit

**MRT**—Maintenance Recovery Team

**MWS**—Missile Warning System

**RA**—Radar Altitude

**SCTS**—Space Cargo Transportation System (SCTS)

***Terms***

**PEN/QEN Mission**—An O&M funded mission specifically constructed for enroute or off-station training. The first three letters of the unique mission number for 60/349 AMW missions are PEN/QEN.

**SCM Aircraft**—Space Cargo Modified aircraft, designated C-5C. Aircraft 80213 and 80216 have modified aft doors and no troop compartments. These changes require special procedures for operation, including unique checklists.

JACK F. PETERS, Colonel, USAF  
Director of Wing Staff